

**HAHN AND ASSOCIATES, INC.**  
ENVIRONMENTAL CONSULTANTS

October 13, 2017

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HAI Project No. 2708  
DEQ ECSI File No. 84

**SUBJECT: Progress Report, NW Natural Site, 7900 NW St. Helens Avenue and  
7200 NW Front Avenue, Portland, Oregon**

Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report to summarize Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural relating to historic manufactured gas plant (MGP) activities at the NW Natural Site during the month of September 2017. NW Natural is completing upland investigation and cleanup activities at the NW Natural Site under the Voluntary Agreement No. ECV-C-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

**1. ACTIONS TAKEN UNDER THE VOLUNTARY AGREEMENT DURING  
THE PREVIOUS MONTH**

Tasks related to maintenance of the HC&C system and the groundwater treatment system were conducted in September 2017, with the system operating in full long-term operational mode.

A total of 10,781,612 gallons of water were treated in the on-site groundwater treatment plant and discharged during September 2017. Discharged water met all effluent criteria set by the facility's NPDES permit.

Baseline DNAPL removal as needed to maintain levels below the top of the well sumps was conducted by Anchor QEA during September 2017 in the following wells near the river shoreline.

- MW-16-45
- MW-26U
- MW-27U
- MW-38U
- MW-PW2L
- PW-2L
- PW-6U

A reconnaissance of Doane Creek and adjacent groundwater level measurements was conducted September 1, 2017 as part of Doane Creek Source Control Evaluation efforts.

NW Natural's third quarter 2017 integrated groundwater monitoring event across the Gasco Operable Unit was initiated during the week of September 5, 2017.

The following upland FS related field tasks were in progress during September:

- Outdoor air sampling activities, to be completed based on DEQ comments from review of the May 2016 *Gasco Uplands Feasibility Study Data Gaps Investigation Work Plan* and subsequent communications, were initiated on September 12, 2017 with deployment of the 30-day passive diffusive samplers. In addition to passive diffusive sampling, 24-hour active air sampling using pumps and TO-17 sorbent tubes occur at approximate 5 day intervals over the course of the 30-day sampling period (e.g., 6 events). During September 2017, 24-hour TO-17 sorbent tube samples were collected over the following timeframes:
  - Event 1: September 14-15, 2017
  - Event 2: September 19-20, 2017
  - Event 3: September 25-26, 2017
  - Event 4: September 29-30, 2017
- Sub-slab soil gas sampling locations (SS-1 through SS-8), previously sampled during April and May 2017 as per the *Gasco Uplands Feasibility Study Data Gaps Investigation Work Plan* were resampled for confirmation purposes during September. The resampling was limited to TO-15 testing in order to evaluate seasonal variability and as a confirmation of previous sampling results. This sub-slab confirmation sampling event was completed on September 11 and 13, 2017.
- Weekly measurements of DNAPL presence at Fill WBZ wells MW-43F, MW-44F, and MW-45F were conducted during September. Since installation in August, measurements have identified DNAPL blebs (not measurable thickness) in well MW-43F; no DNAPL indications within well MW-44F; and approximately 1 foot of DNAPL at the base of well MW-45F.

## **2. ACTIONS SCHEDULED TO BE TAKEN IN THE NEXT MONTH**

NW Natural and DEQ technical working group communications and meetings will occur as needed within the next month to discuss ongoing project tasks.

Routine baseline DNAPL measurements and removal will continue as needed to maintain levels below the top of the well sumps in nearshore HC&C-related wells.

NW Natural's third quarter 2017 integrated groundwater monitoring event across the Gasco Operable Unit (initiated the week of September 5, 2017) is expected to be finished in October.

Ongoing technical analyses and discussions with DEQ to finalize input parameters for the RI/RA Addendum for the Siltronic portion of the Gasco OU will continue during the indicated timeframe.

The following upland FS related tasks will be in progress:

- All remaining outdoor air sampling activities will be completed during October 2017. The 30-day deployment for the passive diffusive samplers will be complete on October 12, 2017 with scheduled sample retrieval to occur on that day. Additionally, the final two 24-hour TO-17 sorbent tube deployments will occur in October, with deployments scheduled for October 4 and 5, 2017 and October 10 and 11, 2017 (both complete).
- Temporary sub-slab soil gas sampling points (SS-1 through SS-8) will be removed during October and the floor at each sample location will be patched to match the surrounding surface.
- DNAPL samples will be collected for laboratory testing from DNAPL mobility assessment Well MW-45F during October. Samples will similarly be collected from DNAPL mobility assessment wells MW-43F and MW-44F should measurable thicknesses be identified at those locations.
- Laboratory data validation activities related to those FS Data Gap Investigation activities that have been previously implemented should be completed during October 2017.

### **3. LABORATORY TEST RESULTS RECEIVED DURING THE PREVIOUS MONTH**

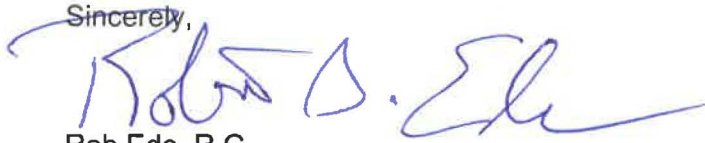
NW Natural receives test results on a regular basis as a result of routine monitoring related to groundwater quality or as specified by various permit requirements. Additionally, test results are periodically received through implementation of task-specific investigation activities resulting from agency-approved work plans. These data are provided to DEQ or the permitting authority (if different than DEQ) in accordance with previously-approved formats and schedules.

### **4. PROBLEMS EXPERIENCED DURING THE PREVIOUS MONTH**

Significant rain fell during the final hour of ambient air testing during the second of six 24-hour TO-17 sample collection events (event ending on September 20, 2017). The air pump for Sampling Station AA-4 became submerged in standing water. Although the sampling tube, suspended within a shelter at a height of approximately 5 feet above the ground was not affected, the pump became non-functional due to water damage. Because we were unable to determine the precise time that this pump stopped functioning and were unable to verify post-test flow rates from this pump, the data from this sample station (September 20 data only) will require assessment and if deemed usable will be qualified as "estimated" since the volume of air passed through the sorbent media will be an estimate.

Should you have any questions, please contact the undersigned.

Sincerely,

A handwritten signature in blue ink, appearing to read "Rob Ede, R.G.", with a stylized flourish at the end.

Rob Ede, R.G.  
Principal

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